

2002-0381.00

**IN THE CLAIMS**

1. (original) An optical scanning system comprising:  
  
a resonant oscillating device having a first magnetic field and a mirrored surface;  
  
a first light source for directing a first beam of light to the mirrored surface of the  
  
resonant oscillating device to provide a first reflected scan beam;  
  
5 a second light source for directing a second beam of light to the mirrored surface of the  
  
resonant oscillating device to provide a second reflected scan beam, the second  
reflected scan beam being offset a first distance from the first reflected scan  
beam; and  
  
a second magnetic field for interacting with the first magnetic field to provide torque to  
10 the resonant oscillating device for scanning the first and second reflected scan  
beams across a surface to provide first and second scan lines on the surface  
substantially simultaneously as the resonant oscillating device oscillates under the  
influence of the first and second magnetic fields.
2. (original) The optical scanning system of claim 1 wherein the first and second light  
sources comprise a dual beam laser.
3. (original) The optical scanning system of claim 1 wherein the surface comprises a  
photoconductive drum.
4. (original) The optical scanning system of claim 1 wherein the first and second light  
sources further comprise first and second control systems for independent control  
of the first and second light sources.

**2002-0381.00**

5. (original) The optical scanning system of claim 1 for providing a third scan line spaced apart from the second scan line a third distance and for providing a fourth scan line spaced apart from the third scan line a fourth distance, wherein the second, third and fourth distances are substantially equal to one another.
6. (original) The optical scanning system of claim 1 wherein the first and second reflected scan beams are scanned back and forth across the surface in two directions as the resonant oscillating device oscillates.
7. (original) The optical scanning system of claim 1 further comprising more than two light sources producing more than two light beams.
8. (original) The optical scanning system of claim 1 wherein the first magnetic field is provided by permanent magnets and the second magnetic field is provided by an electromagnet.
9. (original) The optical scanning system of claim 1 further comprising a modulator for modulating the light beams based on input data and a print mechanism disposed to receive the light beams and produce images on media corresponding to the input data.
10. (withdrawn) The optical scanning system of claim 1 further comprising a modulator for modulating the light beams based on input data and a recording mechanism disposed to receive the light beams and record information corresponding to the input data.
11. (original) A scanning method comprising:

2002-0381.00

providing a resonant oscillating device having a first magnetic field and a mirrored surface;

5 providing a first light source for directing a first beam of light to the mirrored surface of the resonant oscillating device to provide a first reflected scan beam;

providing a second light source for directing a second beam of light to the mirrored surface of the resonant oscillating device to provide a second reflected scan beam, the second reflected scan beam being offset a first distance from the first reflected scan beam;

10 providing a second magnetic field for interacting with the first magnetic field for providing torque to the resonant oscillating device;

applying a current at a drive frequency to a coil creating the first magnetic field to cause the resonant oscillating device to oscillate at or near a resonant frequency as the resonant oscillating device is illuminated by the first and second light sources

15 thereby providing first and second reflected scan beams; and

scanning the first and second scan beams across a surface to provide first and second scan lines on the surface substantially simultaneously as the resonant oscillating device oscillates under the influence of the first and second magnetic fields.

12. (original) The method of claim 11 further comprising providing multiple sets of dual scan lines across a surface wherein each set of dual scan lines is spaced apart from an adjacent set a distance substantially equal to the second distance.

2002-0381.00

13. (original) The method of claim 11 further comprising scanning the first and second reflected scan beams back and forth across the surface in two directions as the resonant oscillating device oscillates.
14. (original) The method of claim 11 further comprising providing multiple sets of N scan lines across a surface wherein each set of N scan lines is spaced apart from an adjacent set a distance substantially equal to the spacing of each N scan lines at the image surface.
15. (original) The method of claim 11 further comprising scanning N reflected scan beams back and forth across the surface in two directions as the resonant oscillating device oscillates.
16. (original) The method of claim 11 further comprising independently controlling the first and second light sources to provide the first and second scan lines on the surface.
17. (original) The method of claim 11 further comprising applying the current to the first or second magnetic field at a frequency sufficient to provide an effective scan efficiency of the resonant oscillating device of at least about 50% while unidirectionally scanning the first and second reflected scan beams across the surface.
18. (original) The method of claim 11 further comprising applying the current to the first or second magnetic field at a frequency sufficient to provide an effective scan efficiency of the resonant oscillating device of at least about 100% while bi-

5

2002-0381.00

directionally scanning the first and second reflected scan beams across the  
5 surface.

19. (original) A method of scanning comprising:

producing at least first and second laser beams and directing the laser beams in a desired  
direction;

oscillating the laser beams at a frequency at or near the resonant frequency of a  
5 mechanical system associated with the laser beams to produce oscillating first and  
second laser beams that move through first and second scan paths, respectively,  
each laser beam moving in a first direction and a second direction, the second  
direction being generally in the opposite direction to the first direction, and  
directing the laser beams toward at least one target surface to produce at least first and  
10 second scan lines on the target surface.

20. (original) The method of claim 19 further comprising the step of detecting at least  
one of the first and second laser beams with at least one sensor to determine the  
times at which the detected laser beam appears at a first location.

21. (original) The method of claim 19 further comprising the step of detecting at least  
one of the first and second laser beams with a single sensor to determine the times  
at which the detected laser beam appears at a first location.

22. (original) The method of claim 19 further comprising the step of detecting both the  
first and second laser beams with a single sensor to determine that the times at  
which the first and second laser beams appear at a first location.

2002-0381.00

23. (original) The method of claim 19 further comprising the step of detecting at least one of the first and second laser beams with first and second sensors to determine the times at which the detected laser beam appears at a first location and a second location.
24. (original) The method of claim 19 further comprising the step of detecting both of the first and second laser beams with first and second sensors to determine the times at which the first and second laser beams appear at a first location and a second location.
25. (original) The method of claim 19 further comprising the step of detecting the first laser beam with first and second sensors and detecting the second laser beam with third and fourth sensors to determine the times at which the first laser beam appears at first and second locations and to determine the times at which the second laser beam appears at third and fourth locations.
26. (original) The method of claim 19 further comprising producing a plurality of laser beams, said plurality being greater than two.
27. (original) The method of claim 19 further comprising the steps of:  
detecting at least one of the first and second laser beams with at least one sensor to determine the times at which the detected laser beam appears at a first location;  
determining the direction of travel of the detected laser beam based upon the times at which the detected laser beam appears at the first location.

2002-0381.00

28. (original) The method of claim 19 further comprising the steps of:

detecting at least one of the first and second laser beams with at least one sensor to

determine the times at which the detected laser beam appears at a first location;

determining the direction of travel of the detected laser beam based upon the times at

5 which the detected laser beam appears at the first location;

determining the time interval during which the first and second laser beams are traveling

across an imaging window based upon the times at which the detected laser beam

appears at the first location; and

modulating the first and second laser beams to produce imaging data on the imaging

10 window.